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La Frontera: student achievement in Texas border and nonborder districts

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September 2007

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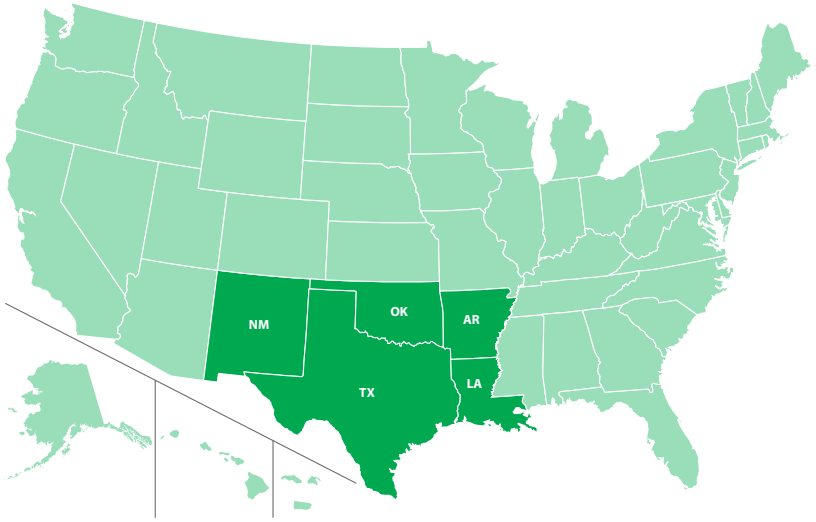

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Summary

La Frontera: student achievement in Texas border and nonborder districts

This study provides policymakers with a data-driven profile of the education environment along the U.S.–Mexico border in Texas, an area known as La Frontera.

The report contrasts the characteristics of border and nonborder districts in Texas from both a demographic and student achievement standpoint. The information in this report should also inform and strengthen border initiatives, such as those emphasized at the 2006 U.S.–Mexico Border Governors Conference.

The study sought to answer three questions. First, how do Texas border and nonborder districts differ in location and size, student demographics, teacher data, and community economics? Second, where significant differences exist between border and nonborder districts, what does the recent literature say about the relationship between these variables and student achievement? And third, how does student performance on the Texas Assessment of Knowledge and Skills (TAKS) differ between border and nonborder districts?

The results:

- *District location and size.* A higher proportion of border districts are in urban or urban fringe settings. The La Frontera region also tends to have more schools per district and higher student enrollments than do the nonborder regions. Coupled with La Frontera's lower socioeconomic status, these factors may contribute to the region's lower achievement.

- *Student demographics.* Border districts enroll higher proportions of Hispanic, limited English proficiency, and bilingual students. The La Frontera student population also has higher concentrations of at-risk and economically disadvantaged students and higher dropout rates at grades 7–12. These characteristics, along with the region's lower family socioeconomic status levels, may contribute to lower achievement.

- *Teacher data.* Border districts employ higher proportions of Hispanic teachers, and the region's teaching force is slightly less experienced than the teaching forces of districts in other parts of the state. Although research suggests that a match between teacher and student ethnic background may bolster achievement, these positive effects may be offset by the relative inexperience of teachers in the border region.

- *Community economic data.* An economic disparity is evident between Texas's border and nonborder regions. Border districts

tend to have much lower family socioeconomic status levels, a category that includes such factors as per capita and family income, educational attainment, and poverty level. Research suggests that districts with lower family socioeconomic status levels tend to have lower student achievement.

- *TAKS pass rates.* At each of the grade levels examined, students in the border region have lower pass rates on the reading or English language arts and mathematics TAKS than students in other regions. This is not surprising considering the unique regional characteristics summarized in this study and existing knowledge about factors related to student achievement. Academic achievement is a cumulative function of family, community, and school experiences. Research suggests that larger districts with lower family socioeconomic status levels and less experienced teachers—the profile associated with the La Frontera region—tend to have lower student achievement.

Further insight could be gained by exploring border and nonborder associations for their explanatory power related to student outcomes. Data reduction techniques—such as factor analysis and principal components analysis—would be a logical choice for this next step. In addition, new primary data collection (perhaps through surveys or targeted interviews) could offer more nuanced insight on how the implementation of the No Child Left Behind Act of 2001 has directly affected students, teachers, and principals along the border.

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THE BORDER EFFECT

The region along the U.S.–Mexico border, commonly known as La Frontera (box 1), is home to about 12 million people (United States–Mexico Border Health Commission, 2007). Industrialization has changed the region dramatically over the past five decades, with commercial growth accelerated by the North American Free Trade Agreement (NAFTA, 1994). After NAFTA many workers from across Mexico came to the border for jobs, and the population of La Frontera jumped 30 percent between 1990 and 2001 (McRobbie & Villegas, 2004).

Despite rapid industrialization and growth, much of La Frontera's population remains poor. According to data from the United States–Mexico Border Health Commission (2007), 3 of the 10 poorest U.S. counties are located along the border with Mexico, and the unemployment rate along the U.S. side of the Texas–Mexico border is three to four times higher than in the rest of the country. In recent years, this rapidly changing environment has raised questions among policymakers about the challenges educators and students face along the border.

Previous studies by WestEd revealed that school districts along the U.S.–Mexico border face a unique set of challenges (Koehler et al., 2002; McRobbie & Villegas, 2004; see also appendix A). In general, schools within 20 miles of the border serve increasing numbers of students coming from high-poverty homes, who speak Spanish as their first language, and whose parents have low education levels (McRobbie & Villegas, 2004). Closer to the border more students also lack access to health or dental care and social or housing services than in other areas, and district leaders reported that variable job trends along the border often led to ebbs and flows in student enrollment and attendance. Students who live in Mexico but come to school in the United States, known as day-crossers, pose a particular challenge. These attendance and enrollment fluctuations make it harder for border districts to forecast revenues, plan budgets, predict staffing needs, and maintain continuity in curriculum and instruction (Koehler et al., 2002).

Schools within 20 miles of the border also have more difficulty recruiting and retaining well-qualified teachers. Border districts, especially those in remote areas, report a frustrating inability to recruit teachers who understand the border's cross-cultural issues and who are trained in instructional strategies for bicultural English learners and their families. Leaders in these districts most often identified the rural nature of the community as their primary recruitment barrier, but many also cited housing shortages and the border region's noncompetitive salaries (Koehler at al., 2002).

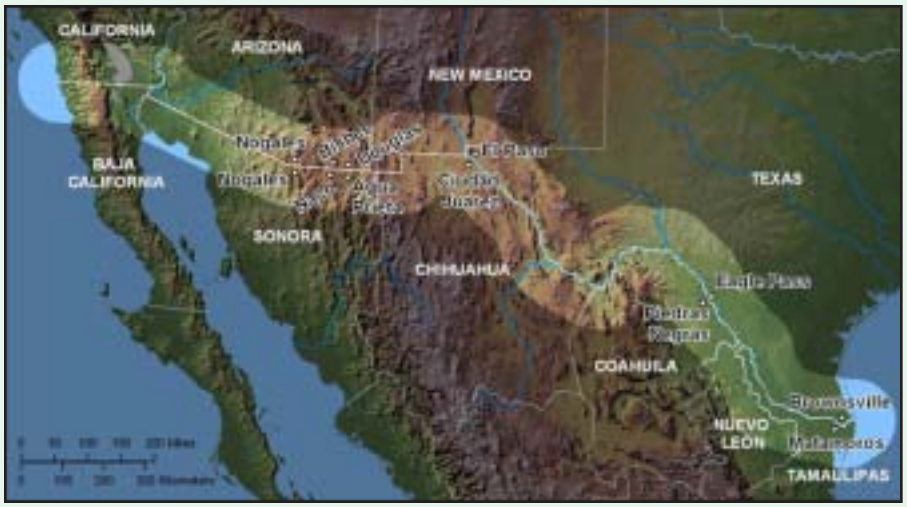
Faced with these challenges, districts within 20 miles of the border in all four states tended to have lower percentages of students testing as proficient on statewide assessments (McRobbie & Villegas, 2004). Findings from these two WestEd studies suggest

BOX 1

The U.S.–Mexico border region

The 1,951-mile border separating the United States and Mexico was created in 1848 under the Treaty of Guadalupe Hidalgo that ended the Mexican–American War. Four years later the Gadsden Purchase established what are today the southern borders of Arizona and New Mexico. Four U.S. states share the border with six Mexican states, covering an expanse of desert and rocky hills, urban centers, and farmland (see map). The Rio Grande River marks the eastern portion of the border, from Brownsville/Matamoros to El Paso/Ciudad Juarez, but the border lacks a natural boundary west of El Paso.

The U.S.–Mexico border region



Source: U.S. Geological Survey (http://tx.usgs.gov/geography/US_MexBorder_colonias.jpg).

that there is a set of characteristics correlated with proximity to the border that are also correlated with poor academic achievement—and these characteristics may impose a negative "border effect" on the academic performance of a district's students.

FACTORS ASSOCIATED WITH STUDENT ACHIEVEMENT

This section discusses factors found in previous studies to be associated with student achievement and provides a context for the variables related to student performance discussed later in the report.

Student background

The publication of *Equality of Educational Opportunity*, commonly known as the Coleman Report (Coleman et al., 1966), marked a sea change in education research. Using national probability samples of elementary and secondary school students, Coleman and his colleagues sought to quantify the link between students' performance on standardized tests and their academic and family environments. Perhaps the study's most influential (and controversial) finding was that when the socioeconomic background of the students was held constant, the differences among schools accounted for only "a small fraction of differences in pupil achievement" (p. 21).

This finding was widely misinterpreted as saying that schooling did not matter and that the most important factor in academic achievement was the family, followed by peers in school (Hanushek, 2003). The Coleman Report led to scores of studies that supported aspects of its findings and clarified

its conclusion. In general, as Rivkin, Hanushek, and Kain (2005) summarized, "Academic achievement at any point is a cumulative function of current and prior family, community, and school experiences" (p. 422).

Researchers continue to work to isolate the factors that influence student achievement. Much of this work uses education production functions, as Coleman and his colleagues did, to estimate how well certain characteristics predict academic achievement. In recent years the development of multilevel statistical models has allowed for more accurate isolation of these factors through the analysis of student characteristics at the student level, school factors at the school level, and district factors at the district level (Konstantopoulos, 2006). Although the results of such school-effects literature have been mixed (much depends on which analytic model is applied to the data and which outcome measure is studied), certain relationships have been consistently identified and common understandings have been reached.

Research has consistently identified disparities between the academic performance of certain subgroups, such as ethnic and language minorities and economically disadvantaged students, and the performance of their peers. Both the backgrounds of individual students and the composition of their school's student body can be strong predictors of average levels of achievement; schools with higher proportions of minority, limited English proficiency, and economically disadvantaged students have traditionally been associated with lower average achievement than other schools (Konstantopoulos, 2006; Rumberger & Palardy, 2005; Zvoch & Stevens, 2006). These achievement gaps have become an established component of most education policy discussions.

The positive association between student achievement and family socioeconomic status is also well established in the literature (Berliner, 2006; Konstantopoulos, 2006; Rumberger & Palardy, 2005; Sirin, 2005; Zvoch & Stevens, 2006).[1, 2] As Sirin made clear in his recent meta-analysis of research on socioeconomic status, family socioeconomic status has one of the strongest correlations with academic performance at both the student and school level. Notably, socioeconomic status is also indirectly linked to achievement through interactions with students' racial and ethnic backgrounds and the locations of their schools and neighborhoods (Berliner, 2006; Sirin, 2005).

Factors found in previous studies to be associated with student achievement provide a context for the variables related to student performance discussed in this report

Moreover, children from low-income and minority families traditionally have been overrepresented in large urban schools, and many studies have documented the difficulties these schools face in attaining and maintaining high achievement levels (Berliner, 2006; Reeves & Bylund, 2005; Thirunarayanan, 2004). Research has also shown that rural schools face their own challenges, such as providing enough qualified teachers, course offerings, and other resources to improve student outcomes (Barley & Beesley, 2007; Lee & McIntyre, 2000). District size is also a factor: smaller school districts tend to have higher achieving students (Driscoll et al., 2003), and the negative relationship between district size and student achievement is strongest for schools with high percentages of students of low socioeconomic status (Abbott et al., 2002).

Teacher quality

Although neighborhood, community, and family environments all influence student achievement, teachers also matter a great deal (Borman & Kimball, 2005; Peske & Haycock, 2006; Rivkin et al., 2005; Tajalli & Opheim, 2005). Because student performance at a particular time, such as during a statewide testing session, reflects a cumulative history of factors, many education researchers now prefer to focus on achievement gains rather than levels (Rivkin et al.; Zvoch & Stevens, 2006). This value-added approach seeks to control for both background conditions and other variables,

allowing a clearer picture of the effects of schooling. With the environment controlled in this way, it becomes apparent that teachers are a key factor influencing student outcomes (Konstantopoulos, 2006; Rivkin et al., 2005; Zvoch & Stevens, 2006): as Konstantopoulos noted, "It appears that the teachers to whom students are assigned may be more important than the schools they attend" (p. 2,577).

Evidence of teachers' effects on student achievement dates back to the Coleman Report, which concluded that teacher characteristics explain more variance in student achievement than any other school resource (Coleman et al., 1966), and recent research corroborates this point. Hanushek (1992) found that being taught by a good teacher instead of a bad one can improve students' academic achievement by a full grade level in a single school year, and Sanders and Rivers showed that teacher effects, both positive and negative, are enduring and cumulative (as cited in Borman & Kimball, 2005). As Sanders and Rivers concluded, students with comparable initial achievement levels have "vastly different academic outcomes as a result of the sequence of teachers to which they are assigned" (as cited in Peske & Haycock, 2006, p. 11).

This report provides information on the relationship between border proximity and student achievement to inform and strengthen border initiatives

The importance of teacher quality is well established, and it is clear that good teachers are effective with students at diverse achievement levels, that teacher effects are persistent, and that teacher effectiveness varies widely (Goldhaber & Anthony, 2003). However, the specific teacher characteristics that lead to better student outcomes are complex and difficult to measure. According to Peske and Haycock (2006), teachers' content knowledge is an important component of their effectiveness, especially at the middle and high school levels. The data are especially clear in mathematics and science, where teachers who majored in the subject they teach tend to elicit higher student performance than teachers who did not. Teachers also have been found to be considerably more effective after two years on the job (Peske & Haycock; Rivkin et al., 2005), and there is strong evidence that students benefit from being matched with teachers of the same race (Hanushek et al., 2005). Research is less clear about the effects of such proxies for teaching knowledge as coursework in pedagogy, certification, advanced education degrees, and scores on exams about pedagogy; some researchers have found a relationship, but others have not (Peske & Haycock).

WHY THIS STUDY?

This study provides a data-driven profile of education in La Frontera. The study examines a wide array of variables grouped into four domains: district location and size, student demographics, teacher data, and community economic data (see appendix B for details on data collection and methodology). It provides descriptive and comparative information in each of the domains, with an emphasis on uncovering differences between the border and nonborder regions. Its aim is to offer state policymakers current information about the border region in Texas. The report contrasts the demographic and student achievement characteristics of border and nonborder districts. It also provides information on the relationship between border proximity and student achievement to inform and strengthen border initiatives, such as those emphasized at the 2006 U.S.–Mexico Border Governors Conference (United States–Mexico Border Governors Conference Joint Declaration, 2006).

In addition, this report offers regional findings on which future research can build. The U.S.–Mexico border region is a challenging research environment, and researchers would benefit from additional exploratory analyses (Garcia, 2003).

The analysis seeks to answer three primary questions:

1. How do Texas's border and nonborder districts differ in location and size, student demographics, teacher data, and community economics?

2. Where there are significant differences between regions, what does the recent literature say about the relationship between these variables and student achievement?

3. On average, how does student performance on the Texas Assessment of Knowledge and Skills (TAKS) differ between border and nonborder districts?

This report offers an overview of the demographic and student-achievement status of districts in the border and nonborder regions, taking into account the findings from Koehler et al. (2002) and McRobbie & Villegas (2004), as well as knowledge on the factors that can influence student achievement.

DISTRICT LOCATION AND SIZE

Some characteristics of location and size differentiate the border and nonborder regions in Texas. A higher proportion of border districts are located in urban or urban fringe settings, and border districts often contain more schools per district. Border districts also have higher overall enrollments than nonborder districts. These differences are important in light of recent findings on the relationships among district size, community socioeconomic status, and student achievement. The education production function literature found that smaller districts tend to have higher-achieving students (Driscoll et al., 2003). Other district-size studies, such as Abbott et al. (2002), found that the negative relationship between district size and student achievement is strongest for schools with high percentages of students of low socioeconomic status, with the relationship weakened and sometimes eliminated among schools with high percentages of students of high socioeconomic status. As Berliner (2006) explains in his discussion of poverty and achievement, students in areas with low socioeconomic status benefit most from small schools in small districts.[3]

Population density

Texas has 1,033 non-charter school districts in both rural and urban areas (tables 1 and 2). Given the academic difficulties faced both by large urban

TABLE 1
Texas school districts by density classification, 2005/06

Density classification	Number of districts	Percent of total
U.S. Census Bureau classification		
Large city	28	2.7
Mid-size city	41	4.0
Urban fringe of large city	125	12.1
Urban fringe of mid-size city	56	5.4
Large town	12	1.2
Small town	144	13.9
Rural—outside standard metropolitan statistical area	398	38.5
Rural—inside standard metropolitan statistical area	229	22.2
Total	1,033	100.0
Simplified classification		
City	69	6.7
Urban fringe	181	17.5
Town/rural	783	75.8
Total	1,033	100.0

Source: Authors' analysis based on data from Texas Education Agency (2006a) and U.S. Department of Education (2007).

TABLE 2
Texas school districts by population density and region, 2005/06

Region	City	Urban fringe	Town/ rural	Total
Border	12	18	33	63
Margin	0	5	57	62
Nonborder	57	158	693	908
Total	69	181	783	1,033

Source: Authors' analysis based on data from Texas Education Agency (2006a) and U.S. Department of Education (2007).

schools (Reeves & Bylund, 2005; Thirunarayanan, 2004) and by schools located in rural areas (Barley & Beesley, 2007; Lee & McIntyre, 2000), the issue warrants discussion.

The U.S. Census Bureau uses eight codes to describe the different levels of urbanicity of school districts. For this analysis, these codes were merged into three more general classifications: city, urban fringe, and town/rural. Approximately 75 percent of Texas school districts were in the town/rural category (see table 1).

When Texas school districts are classified by distance from the U.S.–Mexico border, 63 districts (6.1 percent) fall within the border region (within 20 miles of the border), 62 (6.0 percent) within the margin region (within 21 to 100-miles of the border), and 908 (87.9 percent) within the nonborder region (100 or more miles of the border; see table 2). (See appendix B for definitions of border, margin, and nonborder regions.) Appendix C lists the school districts in each region.

The border region is more urban than the other regions: 30 of the 63 districts in the border region (47.6 percent) are in the city or urban fringe categories, compared with 5 of the 62 districts (8 percent) in the margin region and 215 of the 908 districts (23.7 percent) in the nonborder region.

Concentration of schools

The 1,033 school districts in Texas contain 8,383 schools, and about two-thirds of the districts contain five or fewer schools (table 3). Districts in the border region tend to contain more schools than districts in the other regions. For example, 10 of the 63 border districts (15.9 percent) have more than 30 schools, compared with 44 of the 908 districts (4.8 percent) in the nonborder region and none of 62 districts in the margin region. Similarly, a third of the districts in the border region contain 11 schools or more, whereas only 14 percent of districts in the nonborder region contain this many schools.

Enrollment

In the 2005/06 school year 4,450,139 students were enrolled in the 1,033 public school districts. More than 85 percent of these students were enrolled in nonborder districts, 13 percent in border districts, and 2 percent in margin districts (table 4).

About half (52.8 percent) of Texas districts enrolled 1,000 or fewer students in 2005/06, while 84.4 percent enrolled 5,000 or fewer students (see table 4). An examination of the proportions within regions, however, reveals that the border districts had relatively larger enrollments than did nonborder

TABLE 3
Texas school districts by number of schools and region, 2005/06

Region	5 or fewer schools	6–10 schools	11–30 schools	More than 30 schools	Total
Border	28	14	11	10	63
Margin	51	9	2	0	62
Nonborder	612	171	81	44	908
Total	691	194	94	54	1,033

Source: Authors' analysis based on data from Texas Education Agency (2006a).

TABLE 4
Texas school districts by student enrollment and region, 2005/06

Region	Districts with 500 or fewer students	Districts with 501–1,000 students	Districts with 1,001– 5,000 students	Districts with 5,001– 20,000 students	Districts with 20,001– 50,000 students	Districts with more than 50,000 students	Total
Border	12	8	18	15	9	1	63
Margin	25	16	19	2	0	0	62
Nonborder	292	192	290	94	27	13	908
Total	329	216	327	111	36	14	1,033

Source: Authors' analysis based on data from Texas Education Agency (2006a).

TABLE 5
Texas student enrollment by race/ethnicity and region, 2005/06

	Districts in the border region (*N* = 63)		Districts in the margin region (*N* = 62)		Districts in the nonborder region (*N* = 908)		Group totals	
Race/ethnicity	Number of students	Percentage of students	Number of students	Percentage of students	Number of students	Percentage of students	Number of students	Percentage of students
White	25,912	4.6	20,115	29.3	1,593,292	41.7	1,639,319	36.8
Hispanic	526,756	93.7	46,988	68.5	1,441,728	37.7	2,015,472	45.3
African American	5,796	1.0	1,069	1.6	633,059	16.6	639,924	14.4
Native American	876	0.2	156	0.2	13,771	0.4	14,803	0.3
Asian/ Pacific Islander	2,784	0.5	281	0.4	137,556	3.6	140,621	3.2
Region totals	562,124	100.0	68,609	100.0	3,819,406	100.0	4,450,139	100.0

Source: Authors' analysis based on data from Texas Education Agency (2006a).

districts: 25 of the 63 border districts (39.7 percent) enrolled more than 5,000 students, compared with 134 of the 908 nonborder districts (14.8 percent).

STUDENT DEMOGRAPHICS

Texas border districts report higher concentrations of bilingual, limited English proficiency, economically disadvantaged, and at-risk students, as well as higher dropout rates than do other districts. Recent research indicates that these characteristics can pose a challenge to educators, as low socioeconomic status levels (Berliner, 2006; Rumberger & Palardy, 2005; Sirin, 2005) and high limited English proficiency levels (Lara-Alecio et al., 2005; Stull, 2002) can impede students' academic performance. The region's higher dropout rates suggest that its students in grades 7–12 may be less engaged with school than are their peers across the state.

Race/ethnicity

The Texas border region enrolls a much higher concentration of Hispanic students than do other regions of the state. Almost 94 percent of students in the border region are Hispanic, compared with 69 percent in margin districts and 38 percent in nonborder districts (table 5).

Limited English proficiency and bilingual students

School districts within the border region enroll substantially higher proportions of limited English

proficiency students and bilingual students. On average, 29 percent of the students enrolled in border districts were designated as limited English proficient in 2005/06, compared with 5.8 percent of students in nonborder districts (table 6). The percentage of students enrolled in a bilingual program is also higher on average in border districts (26.6 percent) than in nonborder districts (5.7 percent). Although there are districts in Texas that enroll 40 to 50 percent of their students in bilingual programs, the majority of districts across the state enroll less than 20 percent of their students in these programs.

Economically disadvantaged and at-risk students

In 2005/06, districts in the Texas border region enrolled higher proportions of students designated as economically disadvantaged or at risk. In Texas economically disadvantaged students are those eligible for free or reduced-price lunch or other public assistance, while at-risk students are identified by the state based on a variety of criteria, including homelessness, pregnancy, and placement in a residential facility.[4] On average, 79.3 percent of the students in border districts were economically disadvantaged, and 60.5 percent were designated at-risk. These percentages were significantly lower in nonborder districts (table 7).

Attendance and dropout rates for 2004/05

District-level attendance rates were generally uniform across Texas regions in 2004/05 (the most recent year for which data were available), with reported averages around 96 percent for most groups of students. Conversely, average district dropout rates[5] tended to vary by region, with students in

TABLE 6
Average percentages of limited English proficiency students and bilingual students by region, 2005/06

Region	Average percentage of limited English proficiency students	Average percentage of bilingual students
Border (63 districts)	28.8[a]	26.6[a]
Margin (62 districts)	7.7	6.7
Nonborder (908 districts)	5.8[a]	5.7[a]
Statewide (1,033 districts)	7.3	7.0

a. The differences between the average percentages in border districts and in nonborder districts are statistically significant at the .05 level ($p < .05$). Regional discrepancies involving the margin districts were not the primary focus of this analysis.

Source: Authors' analysis based on data from Texas Education Agency (2006a).

TABLE 7
Average percentages of economically disadvantaged and at-risk students, by region, 2005/06

Region	Average percentage of economically disadvantaged students[a]	Average percentage of at-risk students[b]
Border (63 districts)	79.3[c]	60.5[c]
Margin (62 districts)	60.1	44.0
Nonborder (908 districts)	51.0[c]	40.1[c]
Statewide (1,033 districts)	53.3	41.5

a. The number of students eligible for free or reduced-price lunch or other public assistance divided by the total number of students.

b. The number of students designated as at-risk under Texas Education Code 29.081 criteria divided by the total number of students.

c. The differences between the average percentages in border districts and in nonborder districts are statistically significant at the .05 level ($p < .05$). Regional discrepancies involving the margin districts were not the primary focus of this analysis.

Source: Authors' analysis based on data from Texas Education Agency (2006a).

TABLE 8
Average attendance and dropout rates by region, 2004/05

Region	Average attendance rate (percent)	Number of districts included	Average dropout rate, grades 7–12 (percent)	Number of districts included
Border	96.0	63	0.84[a]	63
Margin	95.7	62	0.57	59
Nonborder	96.1	908	0.44[a]	895
Statewide	96.1	1,033	0.47	1,017

Note: The number of observations differed due to the exclusion of districts where the number of students in the numerator or denominator of the calculation fell below established thresholds. Attendance and dropout rate data for 2005/06 were not available at the time of this study.

a. The differences between the average percentages in border districts and in nonborder districts are statistically significant at the .05 level ($p < .05$). Regional discrepancies involving the margin districts were not the primary focus of this analysis.

Source: Authors' analysis based on data from Texas Education Agency (2006a).

border districts dropping out slightly more often than students in nonborder districts (table 8).

TEACHER DATA

Although many of the teacher-data variables did not differ significantly by region, two differences did stand out. First, border districts tend to employ substantially higher proportions of Hispanic teachers and teachers serving bilingual students, not surprising given the higher concentration of Hispanic students in the border region. This finding may be a positive sign, as Hanushek et al. (2005) found that a shared ethnic and cultural background between teachers and students tends to have a positive effect on student achievement. Second, districts in the border region tend to employ slightly higher proportions of teachers with five years of experience or less. Both Hanushek et al. and Goldhaber and Anthony (2003) concluded that a teacher's experience level is important and that inexperienced teachers, particularly those with two years of experience or less, tend to be less effective. This suggests that La Frontera's teaching force may be slightly less effective.

Ethnicity and language

White teachers constitute 86 percent of the teaching staff in Texas. The proportions across regions vary, with districts in the border region generally employing a higher percentage (65.7 percent) of Hispanic teachers. In addition, the statewide percentage of teachers serving bilingual students is 2.8 percent, but the distribution is positively skewed and many districts report averages far above the statewide rate (table 9). Due to the higher concentrations of limited English proficiency students and bilingual students in the border region (see table 6), it is not surprising to find that the proportion of teachers serving these students is higher closer to the border.

As part of WestEd's earlier La Frontera survey effort (Koehler et al., 2002), border district leaders reported having difficulty finding bilingual teachers. It is impossible to know whether the present proportion of teachers of bilingual students in La Frontera districts (13.5 percent) is adequate to offset the previously reported shortage. More bilingual teachers may still be needed, and this is an issue that should be addressed in future research.

Although many of the teacher-data variables did not differ significantly by region, two differences did stand out: border districts tend to employ higher proportions of Hispanic teachers and to employ slightly higher proportions of teachers with five years of experience or less

Highly qualified teachers

Nearly all teachers in core academic subjects, both in border districts and

TABLE 9
Average percentage of white, Hispanic, and teachers serving bilingual students by region, 2005/06

Region	Average percentage of white teachers	Average percentage of Hispanic teachers	Average percentage of teachers serving bilingual students
Border (63 districts)	32.3[a]	65.7[a]	13.5[a]
Margin (62 districts)	69.0	30.3	2.2
Nonborder (908 districts)	90.9[a]	5.2[a]	2.1[a]
Statewide (1,033 districts)	86.0	10.4	2.8

Note: Full-time equivalent values are allocated across student population types for teachers who serve multiple populations.

a. The differences between the average percentages in border districts and the average percentages in nonborder districts are statistically significant at the .05 level ($p < .05$). Regional discrepancies involving the margin districts were not the primary focus of this analysis.

Source: Authors' analysis based on data from Texas Education Agency (2006a).

TABLE 10
Highly qualified teachers by region, 2005/06

Region	Number of teachers teaching core academic subjects	Teachers meeting highly qualified teacher requirement in core subject taught		Percentage of teachers meeting highly qualified teacher requirement		
		Number	Percentage	By passing exam	Through college major or equivalent	By completing standard
Border (63 districts)	28,143	27,841	98.9	78.2	5.7	16.1
Statewide (1,033 districts)	229,792	226,846	98.7	73.7	6.2	20.1

Note: Highly qualified teachers are defined by the No Child Left Behind Act of 2001 to include a bachelor's degree or higher in the subject taught, full certification, and demonstrated knowledge in the subject taught. This Texas highly qualified teacher data was available only from individual district reports or from a single statewide report; it was not accessible through the academic excellence indicator system reports or the public education information management data systems. As a result, compiling regionwide data on highly qualified teachers for the 908 districts in the comparison region was not feasible. In addition, no tests of statistical significance were conducted because raw data were unavailable.

Source: Author's analysis based on data from Texas Education Agency (2006c).

statewide, have met the No Child Left Behind Act's highly qualified teacher requirement (table 10). Border districts, however, differ slightly from other districts in the ways their teachers meet the requirement.

Meeting the highly qualified teacher requirement in Texas involves either passing the Texas Examinations of Educator Standards in the appropriate subject or completing the state's High Objective Uniform State Standard of Evaluation. The Texas Examinations of Educator Standards are newly developed, criterion-referenced teacher certification tests based on the Texas Essential Knowledge and Skills test; older versions of the same test are called Exams for the Certification of Educators in Texas (Texas Education Agency, 2007). Alternatively, experienced teachers can meet the highly qualified teacher requirement in Texas by completing the High Objective Uniform State Standard of Evaluation, a points system based on teaching experience, college coursework in the subject taught, and state-approved professional development. Some concerns have recently been raised about use of this standard, however, and the Texas Education Agency is set to phase out the standard after the 2006/07 school year.[6]

A higher percentage of teachers in border districts met the federal highly qualified teacher requirement

TABLE 11
Average teacher tenure and average years of teaching experience by region, 2005/06

Region	Average teacher tenure (years)	Average teaching experience (years)	Average distribution of teaching experience				
			Percentage with 0 years	Percentage with 1–5 years	Percentage with 6–10 years	Percentage with 11–20 years	Percentage with more than 20 years
Border (63 districts)	7.8	11.4	8.5	29.1[a]	17.2	25.0[a]	20.3[a]
Margin (62 districts)	7.4	12.8	8.9	20.8	18.2	28.0	24.1
Nonborder (908 districts)	7.4	12.4	7.6	23.1[a]	18.7	28.7[a]	21.9[a]
Statewide (1,033 districts)	7.4	12.4	7.8	23.3	18.6	28.4	21.9

a. The differences between the average percentages in border districts and in nonborder districts are statistically significant at the .05 level ($p < .05$). Regional discrepancies involving the margin districts were not the primary focus of this analysis.

Source: Authors' analysis based on data from Texas Education Agency (2006a).

by passing the Texas Examinations of Educator Standards or the Exams for the Certification of Educators in Texas (78.2 percent, compared with a statewide figure of 73.7 percent), and a slightly lower percentage of border-district teachers have a college degree in their subject (5.7 percent compared with 6.2 percent statewide). Across Texas, 20.1 percent of highly qualified teachers in 2005/06 met the requirement through the High Objective Uniform State Standard of Evaluation process, while in border districts the figure was 16.1 percent.

Tenure and teaching experience

Unlike previous variables examined in this analysis, teachers' tenure and experience levels do not vary significantly by region. Statewide, teacher tenure[7] averages about 7 years, and the average teacher has about 12 years of teaching experience. These distributions are mostly symmetric across districts. However, when teacher experience is divided into categories and border districts are compared with nonborder districts, the data indicate that a slightly higher proportion of teachers in border districts have 1–5 years of experience (29.1 percent compared with 23.1 percent) and a slightly lower percentage have 11 years or more of experience or more (45.3 percent compared with 50.3 percent; table 11).

Average base salary

The average teacher base salary in Texas tends to increase with the number of years the teacher has spent in the classroom. This is not surprising, given the structure of traditional teacher contracts. Data indicate, however, that average base salaries are slightly higher in border districts than in nonborder districts across all experience categories (table 12). This is significant because WestEd's earlier La Frontera survey indicated that leaders in border districts thought that their region offered uncompetitive salaries that posed a barrier to teacher recruitment (Koehler et al., 2002). Additional survey research might provide more information on this issue.

Turnover rates

Research suggests that high turnover rates among teachers have a detrimental effect on student achievement, particularly in urban areas, partly because turnover results in the introduction of new teachers, who tend to be less effective (Hanushek et al., 2005). In 2004/05, the most recent year for which data were available, the

Teachers' tenure and experience levels do not vary significantly by region

TABLE 12
Average base salaries for teachers, by region, 2005/06 (dollars)

Region	New teachers	Teachers with 1–5 years of experience	Teachers with 6–10 years of experience	Teachers with 11–20 years of experience	Teachers with more than 20 years of experience
Border (63 districts)	32,084[a]	33,989[a]	37,758[a]	44,195[a]	50,360[a]
Margin (62 districts)	29,444	30,824	36,022	42,669	46,494
Nonborder (908 districts)	29,458[a]	30,768[a]	35,260[a]	41,267[a]	46,205[a]
Statewide (1,033 districts)	29,623	30,970	35,459	41,531	46,474

a. The differences between the average salaries in border districts and in nonborder districts are statistically significant at the .05 level ($p < .05$). Regional discrepancies involving the margin districts were not the primary focus of this analysis.

Source: Authors' analysis based on data from Texas Education Agency (2006a).

TABLE 13
Average turnover rate among teachers, by region, 2004/05 (percent)

Region	Average turnover rate among teachers
Border (63 districts)	15.0
Margin (62 districts)	18.1
Nonborder (908 districts)	16.4
Statewide (1,033 districts)	16.4

Note: The differences between these percentages are not statistically significant at the .05 level ($p < .05$). Turnover data for 2005/06 were not available at the time of this study.

Source: Authors' analysis based on data from Texas Education Agency (2006a).

average turnover rate among teachers in Texas was 16.4 percent, but rates varied and many districts reported much higher percentages.[8] The data indicate, however, that average turnover rates were relatively uniform across the regions studied in this analysis (table 13).

COMMUNITY ECONOMIC DATA

There are significant and substantive differences in the community economics of the border and nonborder regions of Texas.[9] For example, nonborder districts are home to much higher proportions of adults older than 25 who are high school graduates and college attendees, and family income levels tend to be significantly higher as well. Housing and poverty data showed similar regional discrepancies.

Many studies have documented the complex relationships between student achievement and family and community economic factors (Berliner, 2006; Magnuson & Duncan, 2006; Rumberger & Palardy, 2005; Sirin, 2005). Sirin concluded that of all the factors examined in the meta-analytic literature, the socioeconomic status of the student's family is one of the strongest correlates of academic performance, with even stronger correlations at the aggregate community level than at the student level, a finding supported by Rumberger and Palardy. Berliner explored this relationship more deeply in his discussion of poverty and achievement, explaining that neighborhood or community socioeconomic status plays a major role in student learning and that poverty can severely limit the success of efforts to improve school performance directed solely at within-school factors.

Education attainment

A lower proportion of adults in border districts have graduated from high school or attended college than in other districts (table 14).

Income

Census data indicate that the average per capita income in Texas was $16,991 in 2000 and that the average median family income was $41,520. Both family and per capita incomes were lower on average in border districts than in other districts

TABLE 14
Average education level of adults 25 and older, by region, 2000

Region	Average percentage of adults who are high school graduates	Average percentage of adults with some college education
Border (63 districts)	26.3[a]	19.4[a]
Margin (62 districts)	36.9	22.2
Nonborder (907 districts)	41.5[a]	26.8[a]
Statewide (1,032 districts)	40.3	26.0

a. The differences between the percentages in border districts and in nonborder districts are statistically significant at the .05 level ($p < .05$). Regional discrepancies involving the margin districts were not the primary focus of this analysis.

Source: Authors' analysis based on data from U.S. Department of Education (2007).

TABLE 15
Average per capita, median family, and household income, by region, 2000

Region	Average per capita income (dollars)	Average median family income (dollars)	Average distribution of household incomes (percent)				
			Less than $24,999	$25,000 to $39,999	$40,000 to $59,999	$60,000 to $99,999	$100,000 or more
Border (63 districts)	11,282[a]	27,712[a]	46.5[a]	21.6	15.9[a]	11.5[a]	4.4[a]
Margin (62 districts)	14,785	34,123	35.2	22.7	20.2	16.1	5.9
Nonborder (907 districts)	17,538[a]	42,985[a]	25.9[a]	21.5	22.6[a]	20.7[a]	9.2[a]
Statewide (1,032 districts)	16,991	41,520	27.8	21.6	22.1	19.8	8.8

a. The differences between the averages in border districts and in nonborder districts are statistically significant at the .05 level ($p < .05$). Regional discrepancies involving the margin districts are not the primary focus of this analysis.

Source: Authors' analysis based on data from U.S. Department of Education (2007).

(table 15). Census 2000 data also indicate that nearly half of the households in border districts (46.5 percent) had average incomes below $24,999, while in the margin and nonborder regions 35.2 percent of households in margin districts and 25.9 percent in nonborder districts did.

Housing

The percentage of occupied housing units in a region is a key economic variable because it can indicate where growth and decline in housing stock are occurring. Generally, communities with strong housing growth attract people from other communities, which can lead to rising property values and tax bases. The most recent data available indicate that 84.1 percent of housing in Texas was occupied in 2000. The average percentages of occupied housing were similar across regions in Texas (table 16).

TABLE 16
Average percentage of occupied housing units by region, 2000

Region	Average percentage of occupied housing units
Border (63 districts)	80.4[a]
Margin (62 districts)	77.0
Nonborder (907 districts)	84.8[a]
Statewide (1,032 districts)	84.1

a. The difference between the percentages in border districts and in nonborder districts is statistically significant at the .05 level ($p < .05$). Regional discrepancies involving the margin districts were not the primary focus of this analysis.

Source: Authors' analysis based on data from U.S. Department of Education (2007).

Poverty

According to the most recent data available, 15.4 percent of the Texas population lives below

TABLE 17
Average percentages of the population and of children ages 5–17 living below the poverty level, by region, 2000

Region	Average percentage of population below poverty level	Average percentage of population ages 5–17 below poverty level
Border (63 districts)	31.3[a]	38.6[a]
Margin (62 districts)	21.1	28.0
Nonborder (907 districts)	13.9[a]	17.6[a]
Statewide (1,032 districts)	15.4	19.5

a. The differences between the percentages in border districts and in nonborder districts are statistically significant at the .05 level ($p < .05$). Regional discrepancies involving the margin districts were not the primary focus of this analysis.

Source: Authors' analysis based on data from U.S. Department of Education (2007).

the federal poverty level.[10] That figure jumps to 19.5 percent when limited to children ages 5–17. These proportions tend to be significantly higher in border districts, where an average of 31.3 percent of the overall population and 38.6 percent of children ages 5–17 live below the poverty level. These percentages are more than twice those of nonborder districts (table 17).

TEXAS ASSESSMENT OF KNOWLEDGE AND SKILLS TEST RESULTS

The scores of students who take the Texas Assessment of Knowledge and Skills (TAKS) tests are divided into three categories: did not meet standard, met standard, and commended performance. The section looks at the distributions across regions of students passing the TAKS tests in reading or English language arts and mathematics in grades 3, 5, 8, and 11 (table 18).[11]

On average, lower proportions of students in grades 3, 5, 8, and 11 pass the Texas Assessment of Knowledge and Skills tests in reading or English language arts and mathematics in districts in the Texas border region

On average, lower proportions of students in grades 3, 5, 8, and 11 pass the TAKS tests in reading or English language arts and mathematics in districts in the Texas border region. The regional comparisons reveal similar relationships across the four grades: the percentage of students passing the TAKS test is always lowest in the border region. The discrepancies in the reading or English language arts passing rates range from 4.8 percentage points (at grades 3 and 11) to 13.6 percentage points (at grade 5). The discrepancies in math range from 6.8 percentage points (at grade 3) to 10.7 percentage points (at grade 8).

LIMITATIONS OF THE STUDY

The National Center for Education Statistics and the Texas Education Agency's Academic Excellence Indicator System data warehouse provide the research community with a large number of available variables, but exploring all of them was beyond the scope of this report. The research team attempted to select key descriptors of district location and size, student demographics, teacher data, community economics, and student achievement. Obviously, many other factors could be explored. But this study was meant to follow up on previous work on La Frontera and further explore key variables, and the selected domains will deepen understandings of the policy issues facing the region's educators.

All the selected data items were explored in their raw form, as extracted from their source. The only attempt to transform information or to process data into alternative scales involved the subjective banding of some data items, such as enrollment and number of schools, into more manageable subdivisions. All other analyses used the original units of measure.

TABLE 18

Average percentage of students in grades 3, 5, 8, and 11 passing the 2006 Texas Assessment of Knowledge and Skills in reading or English language arts and mathematics, by region

	Reading or English language arts		Mathematics	
Grade and region	Average percentage of students passing	Number of districts[a]	Average percentage of students passing	Number of districts[a]
Grade 3				
Border	84.5[b]	57	74.8[b]	57
Margin	87.4	54	76.2	58
Nonborder	89.3[b]	736	81.6[b]	813
Statewide	88.9	847	80.8	928
Grade 5				
Border	69.1[b]	58	72.2[b]	58
Margin	77.4	55	76.8	57
Nonborder	82.7[b]	837	81.5[b]	815
Statewide	81.6	950	80.6	930
Grade 8				
Border	76.3[b]	57	58.3[b]	58
Margin	83.5	57	64.6	58
Nonborder	86.2[b]	814	69.0[b]	864
Statewide	85.4	928	68.1	980
Grade 11				
Border	84.2[b]	58	72.1[b]	57
Margin	87.1	49	76.1	53
Nonborder	89.0[b]	741	79.8[b]	801
Statewide	88.5	848	79.1	911

a. Numbers differ due to the exclusion of districts where the number of students in the numerator or denominator of the calculation fell below established thresholds.

b. The differences between the mean 2006 Texas Assessment of Knowledge and Skills passing rates in border districts and those in nonborder districts are statistically significant at the .05 level ($p < .05$). Regional discrepancies involving the margin districts were not the primary focus of this analysis.

Source: Authors' analysis based on data from the Texas Education Agency's Academic Excellence Indicator System 2005/06 data warehouse.

In addition, many variables were not normally distributed and were substantially skewed. When applying traditional linear methods, such as correlation, analysis of variance, or regression, this creates both statistical and inferential problems. Exploring the transformation characteristics of these variables is necessary before more sophisticated modeling can be attempted.

Finally, the TAKS information described in this report was conveyed in terms of the percentage of students in a district meeting the state's proficiency standard (the proportion of students passing the test). By definition, these values fall between 0 and 100. Although this metric is easy to interpret, the distributions of most test variables were negatively skewed and concentrated in the upper regions of the scale. Due to a lack of variance, characteristics such as these retard formal statistical measures of association and thus obfuscate the measure. As such, future efforts to associate the district, student, teacher, and community constructs with achievement may be better served by using TAKS scale scores rather than the percent passing metric.

SUGGESTIONS FOR FURTHER RESEARCH

This study sought to identify distinguishing characteristics of districts that are within 20 miles of

Further insight could be provided by exploring border and nonborder associations for their explanatory power related to student outcomes

the U.S.–Mexico border to provide policymakers with a data-driven profile of the region. Although no statistical modeling was attempted, that seems to be a logical next step. Considerable research has sought to use statistical modeling to isolate the relationships between student achievement and academic and nonacademic factors, but none of this research has studied La Frontera.

Further insight could be provided by exploring border and nonborder associations for their explanatory power related to student outcomes. Given the high level of collinearity across domains and the single level of the measures, data reduction techniques such as factor analysis and principal components analysis would be a logical choice for this next step. Data reduction would allow the variables to reveal (factor) loadings and allow independent, noncollinear models of association to be estimated, examined, and interpreted.

In addition, a new primary data collection effort (perhaps using surveys or targeted interviews) could offer a more nuanced perspective on certain key issues raised in WestEd's previous research efforts (Koehler et al., 2002; McRobbie & Villegas, 2004), including how the implementation of No Child Left Behind has affected students, teachers, and principals in the border region.

APPENDIX A
PREVIOUS STUDIES OF LA FRONTERA

In 2001 the state school board associations in Texas, New Mexico, Arizona, and California jointly commissioned WestEd to investigate the challenges confronting school districts that are within 100 miles of the U.S.–Mexico border, intending to gain a deeper understanding of these districts so decisionmakers could develop effective assistance plans. As part of its research effort WestEd surveyed more than 200 superintendents and school board presidents serving more than 1.1 million students. The resulting report, *Voices of La Frontera: a study of school districts along the United States/Mexico border* (Koehler, Chow, Lee-Bayha, & Harrison, 2002), broadly sketched life in border school districts across the four states. In that report the general shape and features of the La Frontera school districts emerged: their strengths, the challenges they face, and their similarities and differences.

Although the 2002 report identified some of the major issues facing border districts, it also raised questions needing further exploration, so WestEd published a follow-up analysis, *La Frontera: challenges and opportunities for improving education along the U.S.–Mexico border* (McRobbie & Villegas, 2004). Narrowing the focus to school districts within 20 miles of the border, this new report used newly available Census 2000 and student achievement data to update information from the first report and make statewide comparisons.

This current study uses the most up-to-date information on La Frontera to craft a data-driven regional profile that updates WestEd's 2002 and 2004 studies.

Border issues, particularly those related to immigration and security, have received more attention over the past year. Governors, legislators, and state boards of education in the border states are seeking wide-ranging, up-to-date information on the La Frontera region. As Garcia (2003) notes, however, border research has grown more specialized. Education researchers have evaluated the effectiveness of particular interventions for English language learners (Alamguer, 2005; Alanis, Munter, & Tinajero, 2003) and migrant students (Salinas & Franquiz, 2004) along the border, while other border studies have described binational teacher collaborations and exchange programs (Hampton, Liguori, & Rippberger, 2003; Munter, 2004). The colleges of education at the University of Texas at El Paso, San Antonio, and Brownsville, all situated near the border, have directed recent research efforts toward bilingual and cross-cultural issues, and they have expanded their bilingual teacher preparation and professional development initiatives.[12]

Education along the border is influenced by state and federal policies that are sometimes in conflict, putting additional stress on school districts (Koehler et al., 2002). Moreover, implementation of the No Child Left Behind Act of 2001 has complicated the picture for border districts because of its stringent requirements for teacher quality and student achievement. Koehler et al. concluded after surveying education leaders in the border region that much of the work to be done in supporting La Frontera districts should be carried out at the state or regional level. Yet since 2004 little research has treated La Frontera as a region with unique education policy needs.

APPENDIX B
DATA SOURCES AND METHODOLOGY

This analysis considered three questions:

1. How do Texas border and nonborder districts differ in location and size, student demographics, teacher data, and community economics?

2. Where there are significant differences between these regions, what does recent literature say about the relationship between these variables and student achievement?

3. On average, how does student performance on the Texas Assessment of Knowledge and Skills (TAKS) differ between border and nonborder districts?

Data sources

To answer questions 1 and 3, data were collected from the Texas Education Agency's (2006a) Academic Excellence Indicator System, which pulls together a wide range of data on the performance of students in each school and district every year, along with extensive information about staffing, finances, programs, and demographics. Further district-level information was gathered from the National Center for Education Statistics' Common Core of Data (U.S. Department of Education, 2007) and the Texas Education Agency's (2006c) 2005/06 *Highly qualified teachers reports.*

To answer question 2, a search was conducted of the Education Resources Information Center, an Internet-based digital library of education research and information sponsored by the U.S. Department of Education's Institute of Education Sciences. The search used terms such as *impact, influence,* and *affect, effect,* alongside *achievement,* to identify relevant literature, and it limited its results to research published since 2002. The search included mostly peer-reviewed articles and reports funded by the U.S. Department of Education; non-U.S. data were excluded.

Methodology

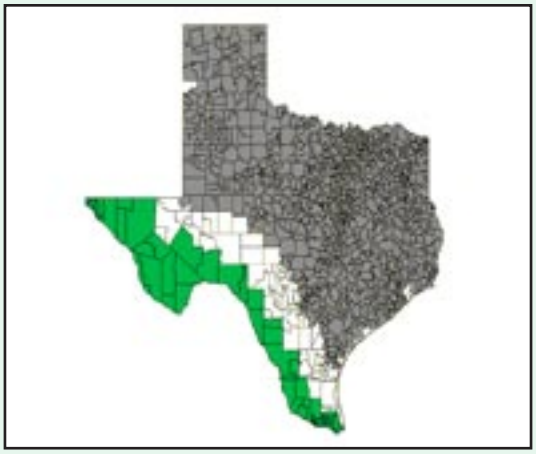
Regional stratification. First, Texas's 1,033 public school districts were divided into border and nonborder categories using geographic information systems analysis. As in the 2004 La Frontera study, border districts were defined as the 63 districts with any portion of their physical boundary at or within 20 linear miles of the U.S.–Mexico border. Nonborder districts were defined as the 908 districts with the nearest portion of their physical boundary 100 or more linear miles from the border. The 62 margin districts in between were those with the nearest portion of their physical boundary more than 20 miles but less than 100 miles from the border.[13] This stratification resulted in the regional grouping displayed in map B.1. (See appendix C for a list of the school districts in each region.)

Exploratory analysis and summary. This study offers an overview of the demographic and student-achievement status of districts in the border and nonborder regions. Taking into account the findings from Koehler et al. (2002) and McRobbie & Villegas (2004) studies, as well as the existing knowledge on the factors that can influence student achievement, this report describes key variables of interest to policymakers concerned with the performance of students in La Frontera. Grouped into four domains (district location and size, student demographics, teacher data, and community economic data), this collection of variables includes district-level measures of population density (rural and urban), student enrollment and racial/ethnic composition, percentages of limited English proficiency students and bilingual students, attendance and dropout rates among students, teachers' experience and academic degrees, proportions of highly qualified teachers, educational attainment among adults, and poverty and income levels.

This exploratory data analysis focused both on the significant differences between border and nonborder regions and on how the data were distributed across districts within the regions. For

MAP B1

Regional stratification of Texas school districts by proximity of district boundary to U.S.–Mexico border, using 20- and 100-mile thresholds



Note: The green region contains the 63 border districts, which have boundaries between 0 and 20 miles from the U.S.–Mexico border. The white region contains the 62 margin districts, which have boundaries more than 20 miles but less than 100 miles from the border. The gray region contains the 908 nonborder districts, which have boundaries 100 miles or more from the border.

Source: Based on data from Census 2000 and Geographic Information Systems MapInfo.

the analysis and distribution, each variable was explored using histograms, box plots, and other distributional statistics. The importance of this will become more evident in future analytic research, when statistical modeling of the variables is considered.

The study presents descriptive and comparative information in each of the domains, with an emphasis on uncovering differences between the border and nonborder regions. Differences between means were evaluated using standard analysis of variance methods. Where significant differences were identified, post hoc comparisons were conducted using Tukey's honesty significant difference statistic.

APPENDIX C
TEXAS NONCHARTER SCHOOL DISTRICTS STRATIFIED BY REGION

Districts 0–20 miles from the border (*N* = 63)

Alpine ISD
Anthony ISD
Brackett ISD
Brownsville ISD
Canutillo ISD
Carrizo Springs CISD
Clint ISD
Comstock ISD
Crystal City ISD
Culberson County-Allamoor ISD
Dell City ISD
Donna ISD
Eagle Pass ISD
Edcouch-Elsa ISD
Edinburg CISD
El Paso ISD
Fabens ISD
Ft Davis ISD
Ft Hancock ISD
Ft Stockton ISD
Harlingen CISD
Hidalgo ISD
Jim Hogg County ISD
La Feria ISD
La Joya ISD
La Villa ISD
Laredo ISD
Los Fresnos CISD
Lyford CISD
Marathon ISD
Marfa ISD
McAllen ISD
Mercedes ISD
Mission CISD
Monte Alto ISD
Pharr-San Juan-Alamo ISD
Point Isabel ISD
Presidio ISD
Progreso ISD
Rio Grande City CISD
Rio Hondo ISD
Roma ISD
San Benito CISD
San Elizario ISD
San Felipe-Del Rio CISD
San Isidro ISD
San Vicente ISD
Santa Maria ISD
Santa Rosa ISD
Sharyland ISD
Sierra Blanca ISD
Socorro ISD
Terlingua CSD
Terrell County ISD
Tornillo ISD
United ISD
Valentine ISD
Valley View ISD
Valley View ISD
Webb CISD
Weslaco ISD
Ysleta ISD
Zapata County ISD

Districts 20–100 miles from the border (*N* = 62)

Agua Dulce ISD
Alice ISD
Balmorhea ISD
Bandera ISD
Ben Bolt-Palito Blanco ISD
Benavides ISD
Bishop CISD
Brooks County ISD
Buena Vista ISD
Charlotte ISD
Cotulla ISD
Crane ISD
Crockett County CISD
D`Hanis ISD
Devine ISD
Dilley ISD
Divide ISD
Driscoll ISD
Freer ISD
George West ISD
Grandfalls-Royalty ISD
Hondo ISD
Hunt ISD
Ingram ISD
Iraan-Sheffield ISD
Irion County ISD
Jourdanton ISD
Junction ISD
Kenedy County Wide CSD
Kerrville ISD
Kingsville ISD
Knippa ISD
La Gloria ISD
La Pryor ISD
Leakey ISD
McCamey ISD
McMullen County ISD
Medina ISD
Medina Valley ISD
Monahans-Wickett-Pyote ISD
Natalia ISD
Nueces Canyon CISD
Orange Grove ISD
Pearsall ISD
Pecos-Barstow-Toyah ISD
Premont ISD
Rankin ISD
Raymondville ISD
Reagan County ISD
Ricardo ISD
Riviera ISD
Rocksprings ISD
Sabinal ISD
San Diego ISD
San Perlita ISD
Santa Gertrudis ISD
Schleicher ISD
Sonora ISD
Three Rivers ISD
Utopia ISD
Uvalde CISD
Wink-Loving ISD

Districts 100 or more miles from the border (*N* = 908)

Abbott ISD
Abernathy ISD
Abilene ISD
Academy ISD
Adrian ISD
Alamo Heights ISD
Alba-Golden ISD
Albany ISD
Aldine ISD
Aledo ISD
Alief ISD
Allen ISD
Alto ISD
Alvarado ISD
Alvin ISD
Alvord ISD
Amarillo ISD
Amherst ISD
Anahuac ISD
Anderson-Shiro CISD
Andrews ISD
Angleton ISD
Anna ISD
Anson ISD
Anton ISD
Apple Springs ISD
Aquilla ISD
Aransas County ISD
Aransas Pass ISD
Archer City ISD
Argyle ISD
Arlington ISD
Arp ISD
Aspermont ISD
Athens ISD
Atlanta ISD
Aubrey ISD
Austin ISD
Austwell-Tivoli ISD
Avalon ISD
Avery ISD
Avinger ISD
Axtell ISD
Azle ISD
Baird ISD
Ballinger ISD
Bangs ISD
Banquete ISD
Barbers Hill ISD
Bartlett ISD
Bastrop ISD
Bay City ISD
Beaumont ISD
Beckville ISD
Beeville ISD
Bellevue ISD
Bells ISD
Bellville ISD
Belton ISD
Benjamin ISD
Big Sandy ISD
Big Sandy ISD
Big Spring ISD
Birdville ISD
Blackwell CISD
Blanco ISD
Bland ISD
Blanket ISD
Bloomburg ISD
Blooming Grove ISD
Bloomington ISD
Blue Ridge ISD
Bluff Dale ISD
Blum ISD
Boerne ISD
Boles ISD
Boling ISD
Bonham ISD
Booker ISD
Borden County ISD
Borger ISD
Bosqueville ISD
Bovina ISD
Bowie ISD
Boyd ISD
Boys Ranch ISD
Brady ISD
Brazos ISD
Brazosport ISD
Breckenridge ISD
Bremond ISD
Brenham ISD
Bridge City ISD
Bridgeport ISD
Broaddus ISD
Brock ISD
Bronte ISD
Brookeland ISD
Brookesmith ISD
Brownfield ISD
Brownsboro ISD
Brownwood ISD
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Columbus ISD
Comal ISD
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Jefferson ISD
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Joaquin ISD

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Littlefield ISD
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Princeton ISD
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Queen City ISD
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Quitman ISD
Rains ISD
Ralls ISD
Ramirez CSD
Randolph Field ISD
Ranger ISD
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Richland Springs ISD
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Round Top-Carmine ISD
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Trinity ISD
Troup ISD
Troy ISD
Tulia ISD
Tuloso-Midway ISD
Turkey-Quitaque ISD
Tyler ISD
Union Grove ISD
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Valley Mills ISD
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Walnut Bend ISD
Walnut Springs ISD
Warren ISD
Waskom ISD
Water Valley ISD
Waxahachie ISD
Weatherford ISD
Weimar ISD
Wellington ISD
Wellman-Union CISD
Wells ISD
West Hardin County CISD
West ISD
West Orange-Cove CISD
West Oso ISD
West Rusk ISD
West Sabine ISD
Westbrook ISD
Westhoff ISD
Westphalia ISD
Westwood ISD
Wharton ISD
Wheeler ISD
White Deer ISD
White Oak ISD
White Settlement ISD
Whiteface CISD
Whitehouse ISD
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Whitewright ISD
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Wichita Falls ISD
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Winnsboro ISD
Winona ISD
Winters ISD
Woden ISD
Wolfe City ISD
Woodsboro ISD
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Woodville ISD
Wortham ISD
Wylie ISD
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Yantis ISD
Yoakum ISD
Yorktown ISD
Zavalla ISD
Zephyr ISD

NOTES

1. The studies cited throughout this discussion are predominantly correlational. They tend to apply statistical techniques such as correlation or regression to large-scale assessment datasets to investigate the factors that influence student achievement. Because they do not feature experimental designs, their findings do not allow for statements of causation. However, as Berliner (2006) points out, there are literally thousands of studies showing correlations between poverty and academic achievement.

2. Although there is some dispute about the definition of socioeconomic status, researchers agree on a three-part definition incorporating parental income, parental education, and parental occupation (Sirin, 2005).

3. However, there is no consensus on the optimal district size. Findings have also been mixed when researchers have compared student achievement in rural and nonrural schools. Overall, findings vary depending on the student population and setting (Lee & McIntyre, 2000; Miley & Associates, 2003; Yan, 2006).

4. Texas's criteria for identifying students who are at risk of dropping out of school are defined in Texas Education Code § 29.081 (2001).

5. Texas's annual dropout rate is calculated as the number of students in grades 7–12 who dropped out at any time during the school year divided by the number of students in grades 7–12 who were in attendance at any time during the school year. Students who dropped out were counted as dropouts from the district last attended. A student is identified as a dropout if he or she is absent without an approved excuse or documented transfer and does not return to school by the fall of the following year, or if he or she completes the school year but fails to re-enroll the following school year (Texas Education Agency, 2006a).

6. For example, in written testimony delivered to the U.S. Senate Committee on Health, Education, Labor and Pensions on March 6, 2007, Amy Wilkins, the Vice President for Government Affairs and Communication with The Education Trust, maintained that "some states hire non-highly qualified teachers and then declare them to be 'not new' to the profession under the highly qualified definition after a year of teaching. These teachers are then permitted to demonstrate content knowledge under [a] less rigorous . . . process that was designed for teachers who were in the profession prior to NCLB [No Child Left Behind] . . ." The full text of Wilkins' testimony is accessible online at http://help.senate.gov/Hearings/2007_03_06/wilkins.pdf. Additional information about Texas's highly qualified teacher requirements and the phaseout of the High Objective Uniform State Standard of Evaluation is available in the Texas Education Agency's Guidance for implementation of NCLB highly qualified teacher requirements at www.tea.state.tx.us/nclb/hqteachers.html.

7. The number of years employed in the reporting district, whether or not there has been any interruption in service.

8. The average turnover rate is calculated as the full-time equivalent count of teachers not employed in the district in the fall of 2004/05 who had been employed in the district in the fall of 2003/04, divided by the full-time equivalent count of teachers in the fall of 2003/04.

9. The information in this section was obtained from the National Center for Education Statistics Common Core of Data, which cross-references the latest available district information with decennial census data. The Common Core of Data does not contain Census 2000 information for South Texas Independent School District. Thus, in this section the district count is reduced to 1,032. The Common

Core of Data is accessible online at http://nces.ed.gov/ccd/.

10. The Census 2000 poverty threshold for a three-person household with one child under 18 was $13,861. For a four-person household (with two children) the poverty threshold was $17,463 (www.census.gov/hhes/poverty/threshld/thresh00.html).

11. Texas's grade 11 students take an English language arts assessment rather than a reading test.

12. Additional information on the research efforts underway at the University of Texas schools of education in El Paso and San Antonio is available at http://academics.utep.edu/Default.aspx?tabid=19461 and http://coehd.utsa.edu/Special/programs.htm.

13. The margin districts were not a focus of this analysis. Nonetheless, summary data on these districts are included in tables throughout this report to provide a more comprehensive picture of the state.

REFERENCES

Abbott, M. L., Joireman, J., & Stroh, H. R. (2002). *The influence of district size, school size and socioeconomic status on student achievement in Washington: A replication study using hierarchical linear modeling.* Lynnwood, WA: Washington School Research Center.

Alanis, I., Munter, J., & Tinajero, J. V. (2003). Preventing reading failure for English language learners: Interventions for struggling first-grade l2 students. *NABE Journal of Research & Practice, 1*(1), 92–112.

Almaguer, I. (2005). Effects of dyad reading instruction on the reading achievement of Hispanic third-grade English language learners. *Bilingual Research Journal, 29*(3), 509–526.

Barley, Z. A., & Beesley, A. D. (2007). Rural school success: What can we learn? *Journal of Research in Rural Education, 22*(1) 1–16.

Berliner, D. C. (2006). Our impoverished view of educational research. *Teachers College Record, 108*(6), 949–995.

Borman, G. D., & Kimball, S. M. (2005). Teacher quality and educational equality: Do teachers with higher standards-based evaluation ratings close student achievement gaps? *Elementary School Journal, 106*(1), 3–20.

Coleman, J. S., Campbell, E. Q., Hobson, C. F., McPartland, J., Mood, A. H., Weinfield, R. D., & York, R. L. (1966). *Equality and educational opportunity.* Washington, DC: U.S. Government Printing Office.

Driscoll, D., Halcoussis, D., & Svorny, S. (2003). School district size and student performance. *Economics of Education Review, 22*(2), 193–201.

Garcia, J. Z. (2003). Directions in border research: An overview. *Social Science Journal, 40*(4), 523–533.

Goldhaber, D., & Anthony, E. (2003). *Teacher quality and student achievement* (Report No. 115, Urban Diversity Series). New York: ERIC Clearinghouse on Urban Education (ERIC Document Reproduction Services No. ED-99-CO-0035).

Hampton, E., Liguori, O., & Rippberger, S. (2003). Binational border collaboration in teacher education. *Multicultural Education, 11*(1), 2–10.

Hanushek, E. A. (1992). The trade-off between child quantity and quality. *Journal of Political Economy, 100*, 84–117.

Hanushek, E. A. (2003). The failure of input-based schooling policies. *The Economic Journal, 113*, F64–F98.

Hanushek, E. A., Kain, J. F., O'Brien, D. M. & Rivkin, S. G. (2005). *The market for teacher quality* (Working Paper 11154). Cambridge, MA: National Bureau of Economic Research.

Koehler, P., Chow, S., Lee-Bayha, J., & Harrison, T. (2002). *Voices from La Frontera: Study of school districts along the United States/Mexico Border.* San Francisco, CA: WestEd.

Konstantopoulos, S. (2006). Trends of school effects on student achievement: Evidence from NLS:72, HSB:82, and NELS:92. *Teachers College Record, 108*(12), 2550–2581.

Lara-Alecio, R., Galloway, M., Mahadevan, L., Mason, B., Irby, B. J., Brown, G., et al. (2005). Texas dual language program cost analysis. Report developed for the Texas Education Agency and the Texas Senate Education Committee. College Station, TX: Texas A&M University.

Lee, J., & McIntyre, W. G. (2000). *Understanding rural student achievement: Identifying instructional and organizational differences between rural and nonrural schools.* Orono, ME: The University of Maine.

Magnuson, K. A., & Duncan, G. J. (2006). The role of family socioeconomic resources in the Black-White test score gap among young children. *Developmental Review, 26*(4), 365–399.

McRobbie, J., & Villegas, M. (2004). *La Frontera: Challenges and opportunities for improving education along the U.S.-Mexico Border.* San Francisco, CA: WestEd.

Miley & Associates, Inc. (2003). *School district organization in South Carolina: Evaluating performance and fiscal*

efficiency (Report prepared for the South Carolina State Education Oversight Committee). Columbia, SC: Author.

Munter, J. H. (2004). Teacher education in the borderlands: Schools, community, and education for social justice at UTEP. *Teacher Education and Practice, 17*(3), 279–298.

No Child Left Behind Act of 2001. Public Law 107–110. 115 Stat. 1425 (2002).

North American Free Trade Agreement. (1994). 32 I.L.M. 289 (pts. 1–3); 32 I.L.M. 605 (pts. 4–8).

Peske, H. G., & Haycock, K. (2006). *Teaching inequality: How poor and minority students are shortchanged on teacher quality.* Washington, DC: The Education Trust.

Reeves, E. B., & Bylund, R. A. (2005). Are rural schools inferior to urban schools? A multilevel analysis of school accountability trends in Kentucky. *Rural Sociology, 70*(3), 360–386.

Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic achievement. *Econometrica, 73*(2), 417–458.

Rumberger, R. W., & Palardy, G. J. (2005). Does segregation still matter? The impact of student composition on academic achievement in high school. *Teachers College Record, 107*(9), 1999–2045.

Salinas, C., & Franquiz, M. E. (Eds.). (2004). *Scholars in the field: The challenges of migrant education* (ERIC Document Reproduction Services No. ED482321). Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools.

Sanders, W. L., & Rivers, J. C. (1996). *Cumulative and residual effects of teachers on future student academic achievement*. Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center.

Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research, 75*(3), 417–453.

Stull, J. C. (2002). *The determinants of achievement: Minority students compared to nonminority students: A research report.* Philadelphia, PA: Mid-Atlantic Regional Educational Laboratory.

Tajalli, H., & Opheim, C. (2005). Strategies for closing the gap: Predicting student performance in economically disadvantaged schools. *Educational Research Quarterly, 28*(4), 44–54.

Texas Education Agency. (2006a). *Academic excellence indicator system.* Test data retrieved January 2007, from http://www.tea.state.tx.us/perfreport/aeis/

Texas Education Agency. (2006b). *Frequently asked questions and answers about the Texas assessment program.* Retrieved January 2007, from http://www.tea.state.tx.us/student.assessment/faq/Frequently_Asked_Questions_and_Answers_12_18_06.pdf

Texas Education Agency. (2006c). *Highly qualified teachers reports.* Retrieved January 2007, from http://www.tea.state.tx.us/nclb/hqreport.html

Texas Education Agency. (2006d). *Public education information management system.* Data retrieved January 2007, from http://www.tea.state.tx.us/peims/

Texas Education Agency. (2007). *Texas examinations of educator standards.* Retrieved June 2007, from http://www.texes.ets.org/texes/

Texas Education Code §29.081. (2001). Retrieved January 2007, from http://tlo2.tlc.state.tx.us/statutes/edtoc.html

Thirunarayanan, M. O. (2004). The 'significantly worse' phenomenon: A study of student achievement in different content areas by school location. *Education and Urban Society 36*(4), 467–481.

United States–Mexico Border Governors Conference Joint Declaration. (2006, August 24–25). Austin, TX.

United States–Mexico Border Health Commission. (2007). *The U.S.–Mexico border region.* Retrieved March 2007, from http://www.borderhealth.org/border_region.php

U.S. Department of Education. (2007, January). *Common core of data.* Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Yan, W. (2006). *Is bigger better? A comparison of rural school districts.* Harrisburg, PA: Center for Rural Pennsylvania.

Zvoch, K., & Stevens, J. J. (2006). Longitudinal effects of school context and practice on middle school mathematics achievement. *Journal of Educational Research, 99*(6), 347–356.